CLAIMS

1. Intramedullary nail, which is specially designed to secure and immobilise fractures in long bones such as the femur, characterised in that it consists of the functional combination of a tubular nail (1-2-3-2') and a probe (4) that can move axially inside the nail, which includes a head (1) from which a plurality of thin rods (2) of a considerable length extend, which are grouped according to an imaginary cylindrical surface and converge towards the node (3), beyond which they extend in considerably wide sections (2') that are independent at their free ends, whilst the probe (4) includes a protrusion (5) close to its distal end, which is initially situated outside the nail and first causes the radial deformation of the terminal section (2') of the rods (2) during the axial movement of the probe relative to the nail and then causes the node (3) to move towards the head (1), which in turn causes a radial expansion of the nail in the proximal area of its rods (2).

2. Intramedullary nail, according to the previous claims, characterised in that a support (6) works with the head (1) of the nail, being the only element of the assembly that is fixed by screws to the bone, specifically at the proximal end thereof, this support (6) having a stepped axial hole (8) for attachment of the head (1) and a radial fin (9) with a pair of holes (10) for screwing the support to the bone.

3. Intramedullary nail, according to the second claim, characterised in that inside the axial hole (8) in the support (6), specifically at the outer end thereof, there is a threaded section (12) for the attachment of a template for drilling into the bone, which is situated in line with the holes (10) of the support (6), and for the subsequent implantation of a collar (13) that can move the threaded rod (4) that constitutes the probe in order to displace the protrusion (5) thereon towards the head (1) of the nail.